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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,984	09/25/2006	Gerhard Meixner	3825	3404

7590 06/09/2009
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EXAMINER

LOPEZ, MICHELLE

ART UNIT	PAPER NUMBER
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3721

MAIL DATE	DELIVERY MODE
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06/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,984	MEIXNER ET AL.	
	Examiner	Art Unit	
	Michelle Lopez	3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11,14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/27/09 has been entered.
2. Claims 2, 10, and 12-13 are canceled.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3-9, 11, 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, in light of the specification, it is not understood what is encompassed by “an angle between the longitudinal axis of the guide cylinder and a rotation axis of the drive unit is adjustable by means of the cranked section”. The language appears to suggest that the guide cylinder and the drive unit are movable in order to adjust the angle between them. However, with the specification, it appears that the guide cylinder is stationary with respect to rest of the claimed parts, and

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the drive unit is not disclosed as to be movable within the housing. Clarification is requested.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 3-5, 7-9, 11, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stirm et al (USPN 7,331,407) in view of Ousbäck (USPN 1,901,981) and Koehler (USPN 3,650,336).** Regarding claims 1 and 4, Stirm discloses an electric power tool, in particular an electric hammer (as shown in the embodiment of fig. 6), having a drive unit (511, 514) contained in a housing, an impact mechanism, and a handle, including a cam mechanism (523, 533) that is driven by the drive unit (511, 514); the impact mechanism has a piston 520 and a striker 569 and arranged to be moveable inside a separate guide cylinder 530 that is stationary in relation to the piston, the striker, and the cam, wherein the piston is connected to the drive unit by a drive element as a rod 531, but fails to disclose wherein said rod is a cranked rod with a cranked section. Ousbäck shows an electric hemmer comprising a cam mechanism 7 that is driven by a drive unit 6; an impact mechanism having a piston 11 and a striker 123 which are arranged to be moveable inside a separate guide cylinder 14 that is stationary in relation to the piston, the striker, and the cam, wherein the piston 11 is connected to the drive unit 6 by a cranked rod 9 with a cranked section 10 for the purposes of allowing a

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change on the length of the stroke of the striker (page 1, lines 8-12). It would have been obvious to one having ordinary skill in the art to have provided Stirm's drive element as a cranked rod as taught by Ousbäck in order to allow a change on the length of the stroke of the striker.

Ousbäck also shows wherein an angle between a longitudinal axis of the drive element 10 and a rotation axis of the drive unit 6 is adjustable by adjusting the position of the ring 8 (page 2, lines 19-31).

5. Regarding claim 1, Stirm fails to disclose a Scotch Yoke slider crank configured to transmit a force between the cam (523, 533) and the drive element 531. Koehler shows an electric hammer comprising a drive unit (as a motor shaft at the vicinity of motor 22; see fig. 7) contained within a housing, an impact mechanism (26, 30), a cam (not shown numerically, positioned between crankpin 203 and crankshaft 204) driven by the drive unit (i.e. motor shaft), a drive element 212, and a Scotch Yoke slider crank 196 configured to transmit a reciprocal force between the cam (not shown numerically) and the drive element 212 for the purpose of reducing the overall length and weight of the hammer, providing a small number of components, and reducing manufacturing of costs (col. 8, lines 74-75, and col. 9, lines 1-3). It would have been obvious to one having ordinary skill in the art to have provided the electric hammer of Stirm having a Scotch Yoke slider crank configured to transmit the force between the cam and drive element as taught by Koehler in order to reduce the overall length and weight of the hammer, provide a small number of components, and reduce manufacturing of costs.

6. Regarding claim 2, Stirm shows wherein the piston 520 is a separate component.

7. Regarding claim 5, Stirm shows wherein the piston 520 and the drive element 531 are connected to each other by a pin as best shown in fig. 1.

8. Regarding claim 7, Stirm shows wherein a piston and a drive element are capable of being embodied as integrally joined to each other as shown in the embodiment of fig.

8. Regarding claim 8, Stirm fails to disclose wherein said drive element is made from plastic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided said drive element comprised of plastic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice, and it would be for the benefits of providing a material with the desired rigidity and flexibility for properly transmitting an impact force. In re Leshin, 125 USPQ 416.

9. Regarding claim 9, Stirm shows wherein the piston 520 and the striker 569 have the same diameter (fig. 6).

10. With respect to claim 11, Koehler shows wherein a pin 203 is able to move inside the slider crank, but fails to disclose wherein said pin is a ball. However, the embodiment of fig. 9, shows a drive pin having a ball shaped head (256) for the purposes of facilitating transmission of reciprocating motion to a piston. It would have been obvious to one having ordinary skill in the art to have provided Koehler's pin 203 (as shown in the embodiment of figs. 8-9) with a ball shaped head in order to facilitate the transmission of reciprocating motion.

11. Regarding claim 14, Stirm's fig. 1 shows wherein the drive unit at the vicinity of 32 is situated centrally in relation to a longitudinal span of the handle 6.

12. With respect to claim 15, Stirm's fig. 1 shows wherein the impact mechanism is embodied as a pot-type piston 520 and a pot-type striker 569 (fig. 6).

13. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stirm et al (USPN 7,331,407) in view of Ousbäck (USPN 1,901,981) and Koehler (USPN 3,650,336), as apply above in claim 1, and further in view of Ross (USPN 4,095,654).**

Stirm shows a piston 520 connected to a drive element 531 by a pin, but fails to disclose wherein the pin has an axis oriented at an angle with respect to a rotation axis of the drive unit 511. Ross teaches the concept of an electric hammer comprising a piston 10 connected to a drive element 36 via pins 46, wherein the pins have an axis oriented at an angle with a rotation axis of a drive unit 17 (as shown in fig. 5) for vibration reduction purposes (col. 5, lines 56-61). It would have been obvious to one having ordinary skill in the art to have provided the modified invention of Stirm further having a piston connecting pin with an axis oriented at an angle with a rotation axis of the drive unit in order to reduce the transmission of vibrations created during operation of the hammer.

14. **Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stirm et al (USPN 7,331,407) in view of Ousbäck (USPN 1,901,981) and Koehler (USPN 3,650,336), as apply above in claim 15, and further in view of Pyatov (USPN 4,828,046).** The modified invention of Stirm discloses an electric power tool having a piston substantially as claimed, but fails to disclose wherein said piston is made from a light alloy. Pyatov teaches the concept of a percussion power tool having an impact piston made from a light alloy, i.e. aluminum, for the purpose of provide a piston made from a material which will properly transmit an impact force while enhancing its durability. It would have been obvious to one having ordinary skill in the art to have

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provided Stirm's piston made from an alloy as taught by Pyatov to provide durability of the piston.

Response to Arguments

15. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

16. For the reasons above, the grounds of rejection are deemed proper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Lopez whose telephone number is 571-272-4464. The examiner can normally be reached on Monday - Thursday: 8:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michelle Lopez/
Examiner, Art Unit 3721

/Rinaldi I Rada/
Supervisory Patent Examiner, Art Unit 3721